



Use Attainability Analysis

for

WBID 1260 Panther Creek

Submitted by  
BWR

June 1, 2007

Submitted to:  
Missouri Department of Natural Resources  
Division of Environmental Quality  
Water Protection Program

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet A - Water Body Identification

#### I. Water Body Information (For water body being surveyed)

Water Body Name (from USGS 7.5' quad):	Panther Creek
Missouri Water Body Identification (WBID) Number:	1260
8-digit HUC:	102 90108
County:	CASS
Upstream Legal Description (from Table H):	15, 44N, 29W
Downstream Legal Description (from Table H):	Mouth
Number of sites evaluated	4
List all sites numbers, listed consequently upstream to downstream:	1, 4, 2, 3

**Site Locations Map(s):** Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest.

#### II. Subsegmentation (fill this section out only in cases where subsegmentation is being proposed)

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION IN METERS)			
Upstream Coordinates:		Downstream Coordinates:	
UTM X	Y	UTM X	Y
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)			
Global Positioning System (GPS)		Interpolation	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other	
Real Time Differential Processing			
HORIZONTAL ACCURACY ESTIMATE			
GPS Data Quality		Interpolation Data Quality	
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____ ± _____ Feet or ± _____ Meters	
EPE	± 26 Feet or ± _____ Meters		
PDOP			

#### III. Discharger Facility Information (list all permitted dischargers on the stream)

Discharger Facility Name(s):	Garden City Municipal WWTF
Discharger Permit Number(s):	MO 0046647

#### IV. UAA Surveyor (please print legibly)

Name of Surveyor	Alan Mitchell	Telephone Number:	
Organization/Employer:	EAE		
Position:	Team Leader		

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Signed:

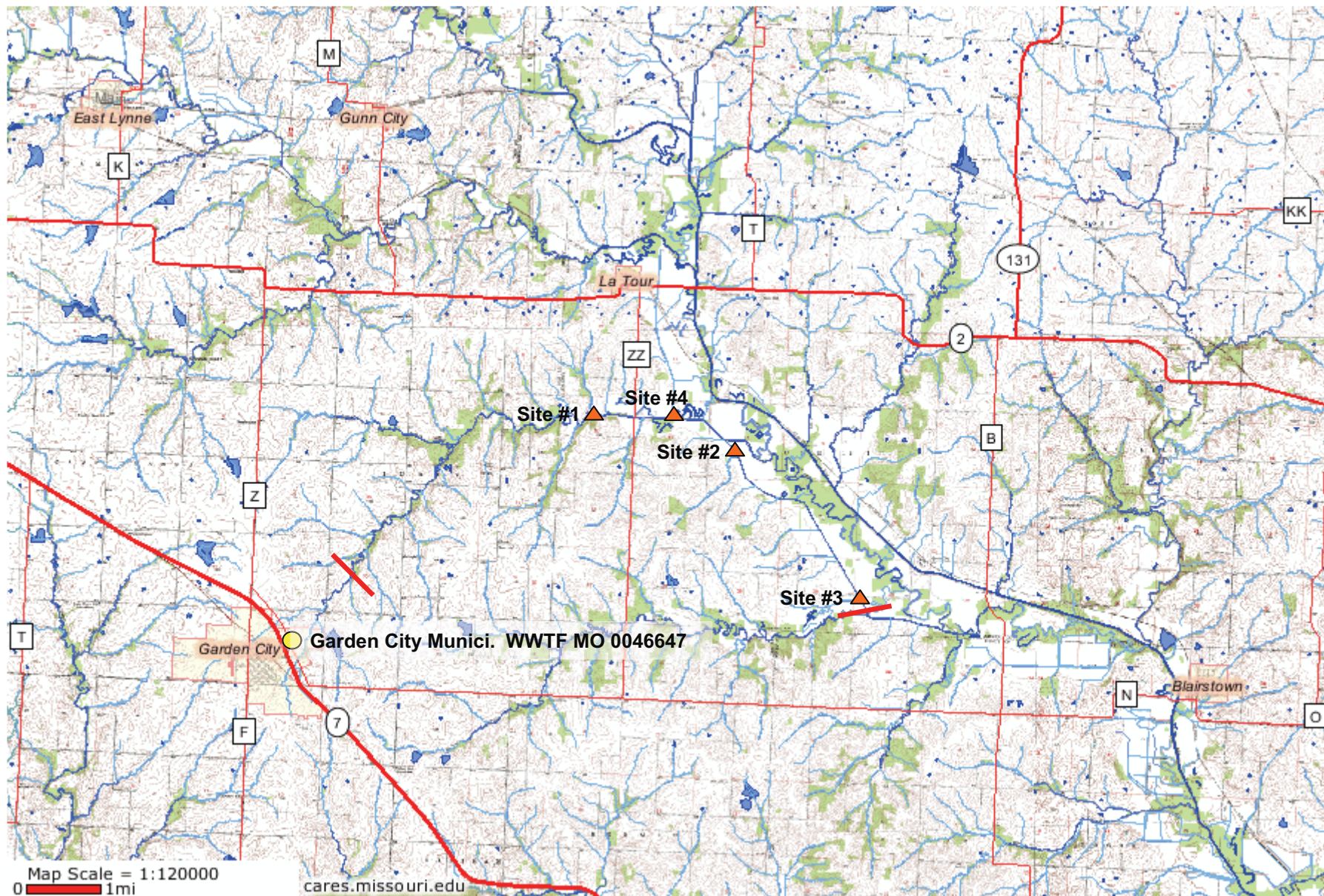
*Alan Mitchell*

Date:

*May 22, 2007*

February 5, 2007

Page 22



Panther Creek  
WBID #1260





WBID# 1260  
Site# 1

Field Data Sheets for Recreational Use Stream Surveys  
Data Sheet B - Site Characterization  
(must be completed for each site)

10 Channel Feature  
Run: 75%  
RIFLE: 5%  
POOL: 20%

Date & Time: 5/22/07	Site Location Description (e.g., road crossing):
Personnel (Data Collectors): Alan Mitchell, Alex Bartlett	UPSTREAM FROM HWY 22 CROSSING (WEST)
Current Weather Conditions: overcast	Facility Name: Garden City Municipal WWTF
Weather Conditions for Past 10 days:	Permit Number: MD 0046647
Drought Conditions?: No drought <input type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

Site Locations:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)	
Site GPS Coordinates: UTM X: 94.09973°W	Y: 38.60734°N
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data):	
Global Positioning System (GPS)	
Static Mode	Interpolation
Dynamic Mode (Kinematic)	Topographic Map or DRG
Precise Positioning Service	Aerial Photograph or DOQQ
Signal Averaging	Satellite Imagery
Real Time Differential Processing	Interpolation Other - UPSTREAM FROM HWY 22 (WEST)
HORIZONTAL ACCURACY ESTIMATE	
GPS Data Quality	
FOM	± _____ Meters
EPE	± _____ Feet or ± _____ Meters
PDOP	
Interpolation Data Quality	
Source Map Scale: 1:24,000 1:100,000 Other _____	
± _____ Feet or ± _____ Meters	

Photos:

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
27, 28		29 & 30			

Uses Observed\*: (Uses actually observed at time of survey.)

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use Data Sheet D- Recreational Use Interview when conducting interviews.)				

Surrounding Conditions\*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Comments:				

Indications of Human Use\*: (attach photos)

<input type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:	
Comments: No evidence of human use.					

70 Channel Feature

Run: 70  
Riffle: 10%  
Pool: 20%

\* Page Two -- Data Sheet B for WBID # 1260: site 1  
Stream Morphology:

Upstream View's Physical Dimensions: Is there any water present at this view? ☒ Yes ☐ No

If so, is there an obvious current? ☒ Yes ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN	<u>10</u>	<u>12</u>	<u>25</u>	<u>0.3</u>	<u>0.3</u>
POOL					

Downstream View's Physical Dimensions: Is there any water present at this view? ☒ Yes ☐ No

If so, is there an obvious current? ☒ Yes ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL	<u>0</u>	<u>12</u>	<u>15</u>	<u>0.5</u>	<u>0.7</u>

Substrate\*: (These values should add up to 100%.)

% Cobble	% Gravel	% Sand	% Silt	<u>100</u> % Mud/Clay	% Bedrock
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Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site)

Water Characteristics\*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

Comments: Please attach any additional comments () to this form.

\*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Surveyor's Signature: Alan W. Pitts Date of Survey: May 22, 2007

Organization: EPA, Inc. Position: Environmental Engineer

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 1260 Site # 1

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect A					
1	wetted width	<0.1		1	Channel Feature:
2	4.0 m	0.1		2	RUN
3		0.1		3	
4	measurements	0.2		4	Dissolved Oxygen
5	0.4 m	0.2		5	
6	apart	0.2		6	8.60 ppm
7		0.2		7	96.2 %
8		0.2		8	20.7 °C
9		0.2		9	
10		0.1		10	
				11	
Transect B					
1	wetted width	<0.1		12	Channel Feature:
2	8.0 m	0.1		13	
3		0.1		14	
4	measurements	0.2		15	Dissolved Oxygen:
5	m	0.2		16	RUN
6	apart	0.2		17	8.65 ppm
7		0.3		18	96.3 %
9		0.3		19	20.7
9		0.2		20	
10		<0.1		21	
				22	
Transect C					
1	wetted width	<0.1		23	Channel Feature:
2	5.5 m	0.2		24	RUN
3		0.2		25	
4	measurements	0.2		26	Dissolved Oxygen
5	m	0.1		.	
6	apart	0.1		.	8.73 ppm
7		0.1		.	97.3 %
8		0.1		n	20.7 °C
9		0.1			
10		<0.1			

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Shawn Mitchell

Date: May 22, 2007

Organization: FBE, Inc.

Position: Environmental Engineer

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 1260 Site # 1

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect D					
1	wetted width	<0.1		1	Channel Feature:
2	7.0 m	0.1		2	RUN
3		0.1		3	
4	measurements	0.1		4	Dissolved Oxygen
5	0.7 m	0.1		5	
6	apart	0.1		6	8.73 ppm
7		0.1		7	97.8 %
8		0.1		8	20.5 °C
9		<0.1		9	
10		<0.1		10	
				11	
Transect E					
1	wetted width	<0.1		12	Channel Feature:
2	5.5 m	0.1		13	RUN
3		0.1		14	
4	measurements	0.1		15	Dissolved Oxygen:
5	0.5 m	0.1		16	
6	apart	0.1		17	8.78 ppm
7		0.2		18	97.8 %
8		0.2		19	20.7 °C
9		0.1		20	
10		<0.1		21	
				22	
Transect F					
1	wetted width	<0.1		23	Channel Feature:
2	4.5 m	0.1		24	RIFFLE
3		0.1		25	
4	measurements	0.1		26	Dissolved Oxygen
5	0.4 m	<0.1			
6	apart	<0.1			9.03 ppm
7		<0.1			109 %
8		<0.1			20.7 °C
9		0.1		n	
10		<0.1			

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Shawn Mitchell

Date: May 22, 2007

Organization: EDE, Inc.

Position: Environmental Engineer

February 5, 2007

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 1260 Site # 1

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect G	wetted width	0.1		1	Channel Feature:
	2.0 m	0.1		2	RUN
		0.2		3	
	measurements	0.2		4	Dissolved Oxygen:
	0.2 m	0.2		5	
	apart	0.2		6	9.08 ppm
		0.1		7	101.0 %
		<0.1		8	20.7 °C
		<0.1		9	
		<0.1		10	
Transect H				11	
	wetted width	<0.1		12	Channel Feature:
	5.0 m	0.2		13	RUN
		0.3		14	
	measurements	0.3		15	Dissolved Oxygen:
	0.5 m	0.3		16	
	apart	0.3		17	8.91 ppm
		0.3		18	99.4 %
		0.2		19	20.7 °C
		0.1		20	
Transect I		<0.1		21	
				22	
	wetted width	<0.1		23	Channel Feature:
	8.0 m	0.2		24	POOL
		0.4		25	
	measurements	0.5		26	Dissolved Oxygen:
	0.8 m	0.4			
	apart	0.3			8.76 ppm
		0.3			98.0 %
		0.3		n	20.7 °C
		0.2			
		<0.1			

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Alan D. Mitchell Date: May 22, 2007  
 Organization: F&E, Inc. Position: Environmental Engineer



Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 1260

Site # 1

Transect	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
J	wetted width	<0.1		1	Channel Feature:
2	2.0 m	0.2		2	POOL
3		0.2		3	
4	measurements	0.3		4	Dissolved Oxygen
5	0.2 m	0.3		5	
6	apart	0.3		6	9.05 ppm
7		0.3		7	99.7 %
8		0.3		8	20.7 °C
9		0.2		9	
10		<0.1		10	
				11	
K	wetted width			12	Channel Feature:
2	7.5 m	<0.1		13	POOL
3		0.1		14	
4	measurements	0.2		15	Dissolved Oxygen:
5	0.7 m	0.2		16	
6	apart	0.2		17	8.87 ppm
7		0.3		18	98.7 %
8		0.3		19	20.8 °C
9		0.3		20	
10		<0.1		21	
				22	
L	wetted width			23	Channel Feature:
2	— m			24	
3				25	
4	measurements			26	Dissolved Oxygen
5	— m			.	
6	apart			.	ppm
7				.	%
8				n	
9					
10					

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: David W. Mitchell

Date: May 22, 2007

Organization: EAE, Inc

Position: Environmental Engineer

February 5, 2007

Site#

1260  
~~12~~ 2

## Data Sheet B - Site Characterization

(must be completed for each site)

(must be completed for each site)	
Date & Time: 10:00am May 22, 2007	Site Location Description (e.g., road crossing): From Sw 1861 RD; WEST THROUGH DRAINAGE DITCH ~ 1/4 MILE TO MAIN STEM PANTHER CREEK
Personnel (Data Collectors): Alan Mitchell Alex Bartlett	
Current Weather Conditions: Overcast	Facility Name: Garden City Municipal WWTF
Weather Conditions for Past 10 days:	Permit Number: MO 0046647
Drought Conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

### Site Locations:

<b>LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)</b>			
Site GPS Coordinates: UTM X: <u>94 082940 W</u>		Y: <u>38 607890 N</u>	
<b>HORIZONTAL COLLECTION METHOD</b> (Indicate the method used to determine the locational data.)			
<b>Global Positioning System (GPS)</b>		<b>Interpolation</b>	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other - <u>FROM SW 1801 RD</u>	
Real Time Differential Processing		<u>WEST THROUGH DRAINAGE DITCH TO A STEM PARTNER</u>	
<b>HORIZONTAL ACCURACY ESTIMATE</b>			
<b>GPS Data Quality</b>		<b>Interpolation Data Quality</b>	
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____  ± _____ Feet or ± _____ Meters	
EPE	± _____ Feet or ± _____ Meters		
PDOP			

**Photos:**

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
35 & 36		37 & 38		31, 32, 33, 34	

**Uses Observed\*:** (Uses actually observed at time of survey.)

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use Data Sheet D- Recreational Use Interview when conducting interviews.)

Maps show Panther Cr. continuing E from this point in miles north of R. H.

**Surrounding Conditions\*:** (Mark all that promote or impede recreational uses. Attach photos of evidence of unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Comments:				

**Indications of Human Use\*:** (attach photos)

<input type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites		<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:
Comments: <i>No evidence of human use</i>					

4.8x15 150m +  
21 101  
84  
170  
180 + 240 = 720m

To Channel Feature  
Run: 90%  
Riffle: 10%  
Pool: 0%

**\*Page Two – Data Sheet B for WBID # 1260: site #2**  
**Stream Morphology:**

**Upstream View's Physical Dimensions:** Is there any water present at this view? ☐ Yes ☐ No  
If so, is there an obvious current? ☐ Yes ☐ No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN	720m	8.0	150	0.1	0.3
POOL					

**Downstream View's Physical Dimensions:** Is there any water present at this view? ☐ Yes ☐ No  
If so, is there an obvious current? ☐ Yes ☐ No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN	720	6.0	100	0.1	0.3
POOL					

**Substrate\*:** (These values should add up to 100%.)

% Cobble	30	% Gravel		% Sand		% Silt	70	% Mud/Clay		% Bedrock	
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**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site)

**Water Characteristics\*:** (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

**Comments:** Please attach any additional comments () to this form.

\*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Surveyor's Signature: Steve G. Mitchell Date of Survey: May 22, 2007  
Organization: EAE, Inc. Position: Env. Engr.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 1260

Site # 2

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect A	1 wetted width	<0.1		1 Channel Feature:	
	2 5.0m	<0.1		2 RIFLE	
	3	<0.1		3	
	4 measurements	<0.1		4 Dissolved Oxygen	
	5 0.5 m	<0.1		5	
	6 apart	0.1		6 15.18	ppm
	7	0.1		7 164.5	%
	8	0.1		8 20.9	°C
	9	0.1		9	
	10	<0.1		10	
Transect B	1 wetted width	<0.1		11	
	2 8.0 m	0.1		12 Channel Feature:	
	3	0.1		13 RUN	
	4 measurements	0.1		14	
	5 0.8 m	0.1		15 Dissolved Oxygen:	
	6 apart	0.1		16	
	7	0.1		17 15.22	ppm
	8	0.1		18 162.9	%
	9	0.1		19 20.4	°C
	10	20.1		20	
Transect C	1 wetted width	<0.1		21	
	2 8.0 m	0.2		22	
	3	0.2		23 Channel Feature:	
	4 measurements	0.2		24 RUN	
	5 0.8 m	0.2		25	
	6 apart	0.2		26 Dissolved Oxygen:	
	7	0.1		.	
	8	<0.1		.	
	9	0.1		n 14.5	ppm
	10	<0.1		.	

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: W. J. Mitchell

Date: May 22, 2007

Organization: EAE, Inc.

Position: Env. Engr.

Data Sheet C - Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 1260

Site # 2

Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect D1	wetted width	<0.1	1	Channel Feature:
2	8.0 m	0.1	2	RUN
3		0.1	3	
4	measurements	0.1	4	Dissolved Oxygen
5	0.8 m	0.1	5	
6	apart	0.1	6	14.63 ppm
7		0.2	7	155.6 %
8		<0.3	8	20.5 °C
9		0.2	9	
10		0.1	10	
			11	
Transect E1	wetted width	<0.1	12	Channel Feature:
2	8.0 m	0.1	13	RUN
3		0.2	14	
4	measurements	0.2	15	Dissolved Oxygen:
5	0.8 m	0.2	16	
6	apart	0.2	17	14.63 ppm
7		0.3	18	158.6 %
9		0.3	19	20.9 °C
9		0.2	20	
10		<0.1	21	
			22	
Transect F1	wetted width	<0.1	23	Channel Feature:
2	8.0 m	0.2	24	RUN
3		0.2	25	
4	measurements	0.2	26	Dissolved Oxygen
5	0.8 m	0.2	.	15.05 ppm
6	apart	0.2	.	165.2 %
7		0.2	.	21.0 °C
8		0.3	n	
9		0.3		
10		0.1		

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Shelby Mitchell

Date: May 22, 2007

Organization: EAE, Inc.

Position: Env. Engr



a Sheet C - Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 1260

Site # 2

Transect G

Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
1 wetted width	0.1		1 Channel Feature:	
2 8.0 m	0.3		2 RUN	
3	0.2		3	
4 measurements	0.2		4 Dissolved Oxygen	
5 0.8 m	0.2		5	
6 apart	0.1		6 15.22 ppm	
7	<0.1		7 167.6 %	
8	<0.1		8 21.0 °C	
9	<0.1		9	
10	<0.1		10	
			11	
Transect <u>H</u> 1 wetted width	0.1		12 Channel Feature:	
2 7.0 m	0.2		13 RUN	
3	0.2		14	
4 measurements	0.2		15 Dissolved Oxygen:	
5 0.7 m	0.2		16	
6 apart	0.1		17 15.52 ppm	
7	<0.1		18 165.3 %	
8	<0.1		19 21.0 °C	
9	<0.1		20	
10	<0.1		21	
			22	
Transect <u>I</u> 1 wetted width	<0.1		23 Channel Feature:	
2 7.0 m	0.2		24 RUN	
3	0.2		25	
4 measurements	0.2		26 Dissolved Oxygen:	
5 0.7 m	0.2			
6 apart	0.3		15.63 ppm	
7	0.4		173.1 %	
8	0.3		n 21.2 °C	
9	0.2			
10	<0.1			

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Abel Mitchell

Date: May 22, 2007

Organization: EAE/Inc.

Position: Env. Engr

February 5, 2007

Data Sheet C - Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 1260 Site # 2

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect J	1 wetted width	<0.1		1 Channel Feature:	
	2 7.0 m	0.3		2 RUN	
	3	0.2		3	
	4 measurements	0.1		4 Dissolved Oxygen	
	5 0.7 m	0.1		5	
	6 apart	<0.1		6 21.3	ppm
	7	0.1		7 174.9	%
	8	0.2		8 16.2	°C
	9	0.1		9	
	10	<0.1		10	
Transect K	1 wetted width	<0.1		11	
	2 7.0 m	<0.1		12 Channel Feature:	
	3	<0.1		13 RUN	
	4 measurements	<0.1		14	
	5 0.7 m	0.1		15 Dissolved Oxygen:	
	6 apart	0.1		16	
	7	0.1		17 16.72	ppm
	8	0.1		18 172.5	%
	9	0.1		19 21.3	°C
	10	<0.1		20	
Transect L	1 wetted width			21	
	2 m			22	
	3			23 Channel Feature:	
	4 measurements			24	
	5 m			25	
	6 apart			26 Dissolved Oxygen	
	7			.	ppm
	8			.	%
	9			n	
	10				

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: John G. Mitchell

Date: May 22, 2007

Organization: EAE, Inc.

Position: Env. Engr

WBID# 1260  
 Site# 3

**Field Data Sheets for Recreational Use Stream Surveys**  
**Data Sheet B - Site Characterization**  
 (must be completed for each site)

Date & Time: <u>11:30 AM 5/22/2007</u>	Site Location Description (e.g., road crossing): <u>BRIDGE CROSSING</u>
Personnel (Data Collectors): <u>Alan T. Fehett</u> <u>Alex Bartlett</u>	<u>@ SW 1225 TH RD (JOHNSON CO.)</u>
Current Weather Conditions: <u>Clear</u>	Facility Name: <u>Garden City Municipal WWTF</u>
Weather Conditions for Past 10 days:	Permit Number: <u>MO0046647</u>
Drought Conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

**Site Locations:**

<b>LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)</b>	
Site GPS Coordinates: UTM X:	Y:
<b>HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)</b>	
Global Positioning System (GPS)	
Static Mode	Interpolation
Dynamic Mode (Kinematic)	Topographic Map or DRG
Precise Positioning Service	Aerial Photograph or DOQQ
Signal Averaging	Satellite Imagery
Real Time Differential Processing	Interpolation Other - <u>SW 1225 TH RD</u> <u>(JOHNSON CO.)</u>
<b>HORIZONTAL ACCURACY ESTIMATE</b>	
GPS Data Quality	
FOM	Interpolation Data Quality
± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____
EPE	± _____ Feet or ± _____ Meters
PDOP	

**Photos:**

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>39 &amp; 40</u>		<u>41 &amp; 42</u>			

**Uses Observed\*:** (Uses actually observed at time of survey.)

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use Data Sheet D- Recreational Use Interview when conducting interviews.)

**Surrounding Conditions\*:** (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Comments:

**Indications of Human Use\*:** (attach photos)

<input type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:	

Comments:

February 5, 2007

No evidence of human use  
Alan W. Melville E4E Inc. 5/22/2007  
Env. Engr. Page 23

channel feature

Run!

RIFFLE:

POOL:

\* Page Two – Data Sheet B for WBID # 1260 : site 3  
Stream Morphology:

Upstream View's Physical Dimensions: Is there any water present at this view? ☐ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN	270 m	8 m	150 m	0.1	0.4
POOL					

Downstream View's Physical Dimensions: Is there any water present at this view? ☐ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN	270 m	6 m	150	0.2	0.3
POOL					

Substrate\*: (These values should add up to 100%.)

% Cobble	30	% Gravel		% Sand		% Silt	10	% Mud/Clay		% Bedrock	
----------	----	----------	--	--------	--	--------	----	------------	--	-----------	--

Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site)

Water Characteristics\*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

Comments: Please attach any additional comments () to this form.

\*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Surveyor's Signature: Alicia Vitale Date of Survey: May 22, 2007

Organization: EAE, Inc. Position: Env. Engr.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 1260 Site # 3

Transect  
A

Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
1 wetted width	<0.1		1 Channel/Feature:	
2 5.0 m	0.3		2 RUN	
3	0.4		3	
4 measurements	0.4		4 Dissolved Oxygen:	
5 0.5 m	0.4		5	
6 apart	0.3		6 13.46 ppm	
7	0.1		7 154.2 %	
8	0.1		8 22.0 °C	
9	<0.1		9	
10	<0.1		10	
			11	
1 wetted width	0.1		12 Channel/Feature:	
2 6.0 m	0.4		13 RUN	
3	0.5		14	
4 measurements	0.4		15 Dissolved Oxygen:	
5 0.6 m	0.3		16	
6 apart	0.2		17 13.29 ppm	
7	0.1		18 158.4 %	
8	0.1		19 22.3 °C	
9	0.1		20	
10	<0.1		21	
			22	
1 wetted width	0.2		23 Channel/Feature:	
2 8.0 m	0.3		24 RUN	
3	0.3		25	
4 measurements	0.3		26 Dissolved Oxygen:	
5 0.8 m	0.3		.	
6 apart	0.2		.	
7	0.2		.	
8	0.1		n 13.78 ppm	
9	0.1		.	
10	0.1		n 1105.6 %	
			.	
			n 22.4 °C	

Transect  
B

Transect  
C

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Alan D. Mitchell

Date: May 22, 2007

Organization: EAE, Inc.

Position: Env. Eng.



Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 1260

Site # 3

Transect  
D

Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
1 wetted width	<0.1		1 Channel/feature:	
2 7.5 m	0.2		2 RUN	
3	0.2		3	
4 measurements	0.1 (0.0)		4 Dissolved Oxygen	
5 0.7 m	0.1		5	
6 apart	<0.1		6 13.92 ppm	
7	<0.1		7 157.6 %	
8	0.2		8 22.5 °C	
9	0.3		9	
10	0.2		10	
			11	
1 wetted width	<0.1		12 Channel Feature:	
2 3.0 m	0.1		13	
3	0.1		14	
4 measurements	<0.1		15 Dissolved Oxygen:	
5 0.3 m	0.1		16 RIFFLE	
6 apart	0.1		17 15.08 ppm	
7	0.1		18 169.7 %	
8	<0.1		19 22.2 °C	
9	<0.1		20	
10	<0.1		21	
			22	
1 wetted width	<0.1		23 Channel Feature:	
2 3.5 m	<0.1		24 RIFFLE	
3	<0.1		25	
4 measurements	<0.1		26 Dissolved Oxygen	
5 m	0.1			
6 apart	<0.1			
7	<0.1			
8	<0.1			
9	0.1			
10	<0.1			

Transect  
E

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Shawn Mitchell

Date: May 22, 2007

Organization: EAE, Inc.

Position: Env. Engr.

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 1260

Site # 3

Transect

Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
1 wetted width	<0.1		1 Channel Feature:	
2 5.0 m	0.4		2 RUN	
3	0.4		3	
4 measurements	0.4		4 Dissolved Oxygen	
5 0.5 m	0.3		5	
6 apart	0.3		6 16.04 ppm	
7	0.3		7 102.8 %	
8	0.2		8 22.0 °C	
9	<0.1		9	
10	<0.1		10	
			11	
1 wetted width	<0.1		12 Channel Feature:	
2 5.0 m	<0.1		13 RUN	
3	<0.1		14	
4 measurements	<0.1		15 Dissolved Oxygen:	
5 0.5 m	0.1		16	
6 apart	0.2		17 15.48 ppm	
7	0.2		18 169.3 %	
8	0.1		19 22.0 °C	
9	0.1		20	
10	<0.1		21	
			22	
1 wetted width	<0.1		23 Channel Feature:	
2 3.0 m	<0.1		24 RUN	
3	0.1		25	
4 measurements	0.1		26 Dissolved Oxygen	
5 0.3 m	0.1		27	
6 apart	0.2		28 14.52 ppm	
7	0.2		29 160.5 %	
8	0.2		30 22.0 °C	
9	0.1			
10	<0.1			

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Robert Mitchell

Date: May 22, 2007

Organization: EHE, Inc.

Position: Env. Engr

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 1260 Site # 3

Transect	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
J	1 wetted width	<0.1		1 Channel Feature:	
	2 4.0 m	0.1		2 RUN	
	3	0.1		3	
	4 measurements	0.1		4 Dissolved Oxygen	
	5 0.4 m	0.2		5	
	6 apart	0.2		6 16.07 ppm	
	7	0.2		7 187.3 %	
	8	0.2		8 22.0 °C	
	9	<0.1		9	
	10	<0.1		10	
K	1 wetted width	<0.1		11	
	2 4.0 m	0.1		12 Channel Feature:	
	3	0.1		13 RUN	
	4 measurements	0.1		14	
	5 0.4 m	0.1		15 Dissolved Oxygen:	
	6 apart	0.1		16	
	7	0.1		17 15.30 ppm	
	8	0.2		18 149.3 %	
	9	0.1		19 22.0 °C	
	10	<0.1		20	
L	1 wetted width			21	
	2 — m			22	
	3			23 Channel Feature:	
	4 measurements			24	
	5 — m			25	
	6 apart			26 Dissolved Oxygen:	
	7			.	
	8			.	
	9			n	
	10				

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Alan W. Mitchell

Date: May 22, 2007

Organization: EAE, Inc.

Position: Env. Engr

WBID# 1260  
Site# 9

**Field Data Sheets for Recreational Use Stream Surveys**  
**Data Sheet B - Site Characterization**  
(must be completed for each site)

Date & Time: <u>5/25/07 1435</u>	Site Location Description (e.g., road crossing): <u>Rd 77 bridge crossing (EAST)</u>
Personnel (Data Collectors): <u>K. Snetten/A. Bartlett</u>	Facility Name: <u>Garden City Municipal WWTF</u>
Current Weather Conditions: <u>Cloudy</u>	Permit Number: <u>MD 0046047</u>
Weather Conditions for Past 10 days:	
Drought Conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

**Site Locations:**

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)	
Site GPS Coordinates: UTM X: <u>38.60822 N</u>	Y: <u>094.09674 W</u>
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.):	
Global Positioning System (GPS)	
Static Mode	Interpolation
Dynamic Mode (Kinematic)	Topographic Map or DRG
Precise Positioning Service	Aerial Photograph or DOQQ
Signal Averaging	Satellite Imagery
Real Time Differential Processing	Interpolation Other
HORIZONTAL ACCURACY ESTIMATE	
GPS Data Quality	
FOM	Interpolation Data Quality
± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____
EPE	± _____ Feet or ± _____ Meters
PDOP	± _____ Feet or ± _____ Meters

**Photos:**

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
	<u>upstream</u>		<u>downstream</u>		

**Uses Observed\*:** (Uses actually observed at time of survey.)

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use Data Sheet D- Recreational Use Interview when conducting interviews.)

**Surrounding Conditions\*:** (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Comments:

**Indications of Human Use\*:** (attach photos)

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:	

Comments:

\* Page Two – Data Sheet B for WBID # 1260 : SITE # 4

Run - 30  
Riffle - 0  
Pool - 70

**Stream Morphology:**

**Upstream View's Physical Dimensions:** Is there any water present at this view? ☐ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

**Downstream View's Physical Dimensions:** Is there any water present at this view? ☐ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

**Substrate\*:** (These values should add up to 100%.)

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock

**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site)

Macrophytes on Bank

**Water Characteristics\*:** (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input checked="" type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

**Comments:** Please attach any additional comments () to this form.

\*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Surveyor's Signature: Kerry Suther Date of Survey: 5/25/07

Organization: BWR Position: Env. Scientist



Data Sheet C - Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 1260

Site # 4

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect A	1 wetted width	0.1 m			
	2 8.8 m	0.3 m		1	Channel Feature: POOL
	3	0.2 m		2	
	4 measurements	0.4 m		3	
	5 0.88 m	0.3 m		4	Dissolved Oxygen
	6 apart	0.3 m		5	
	7	0.3 m		6	11.00 ppm
	8	0.2 m		7	110 %
	9	0.2 m		8	
	10	0.1 m		9	
Transect B	1 wetted width	0.1 m		10	
	2 7.5 m	0.2 m		11	
	3	0.2 m		12	Channel Feature: POOL
	4 measurements	0.2 m		13	
	5 0.75 m	0.2 m		14	
	6 apart	0.2 m		15	Dissolved Oxygen:
	7	0.2 m		16	
	8	0.2 m		17	11.12 ppm
	9	0.2 m		18	111 %
	10	0.2 m		19	
Transect C	1 wetted width	<0.1 m		20	
	2 8.7 m	0.2 m		21	
	3	0.2 m		22	
	4 measurements	0.2 m		23	Channel Feature: POOL
	5 0.87 m	0.2 m		24	
	6 apart	0.2 m		25	
	7	0.2 m		26	Dissolved Oxygen
	8	0.2 m		.	10.77 ppm
	9	0.2 m		.	107 %
	10	<0.1 m		n	

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth is the middle rank is the median depth.  
If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Kerry Snodden

Date: 5/25/07

Organization: BWR

Position: Env. Scientist

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 1260

Site # 4

Transect	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
D	1 wetted width	40.1 m			
	2 8.5 m	0.1 m		1	Channel Feature: POOL
	3	0.2 m		2	
	4 measurements	0.2 m		3	
	5 0.85 m	0.2 m		4	Dissolved Oxygen
	6 apart	0.2 m		5	
	7	0.2 m		6	10.70 ppm
	8	0.1 m		7	107 %
	9	0.2 m		8	
	10	0.1 m		9	
E	1 wetted width	40.1 m		10	
	2 7.9 m	0.1 m		11	
	3	0.1 m		12	Channel Feature: POOL
	4 measurements	0.1 m		13	
	5 0.79 m	0.2 m		14	
	6 apart	0.2 m		15	Dissolved Oxygen:
	7	0.2 m		16	
	8	0.2 m		17	10.42 ppm
	9	0.1 m		18	104 %
	10	40.1 m		19	
F	1 wetted width	40.1 m		20	
	2 7.2 m	0.1 m		21	
	3	0.1 m		22	
	4 measurements	0.2 m		23	Channel Feature: POOL
	5 0.72 m	0.1 m		24	
	6 apart	0.2 m		25	
	7	0.1 m		26	Dissolved Oxygen
	8	0.1 m		.	10.25 ppm
	9	0.1 m		.	102 %
	10	40.1 m		n	

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth the middle rank is the median depth.  
If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UA datasheet is true and accurate.

Signed: Kerry Smith

Date: 5/25/07

Organization: BWP

Position: Env. Scientist

February 5, 2007

Data Sheet C - Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 1260

Site # 4

Transect	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect G	wetted width	<0.1 m			
	7.4 m	0.1 m		1	Channel Feature: POOL
		0.1 m		2	
		0.1 m		3	
	measurements	0.1 m		4	Dissolved Oxygen
	0.74 m	0.1 m		5	
	apart	0.1 m		6	10.08 ppm
		0.2 m		7	100 %
		0.1 m		8	
		<0.1 m		9	
Transect H				10	
	wetted width	<0.1 m		11	
	6.6 m	0.1 m		12	Channel Feature: POOL
		0.1 m		13	
	measurements	0.2 m		14	
	0.66 m	0.2 m		15	Dissolved Oxygen:
	apart	0.3 m		16	
		0.3 m		17	9.91 ppm
		0.3 m		18	99 %
		0.2 m		19	
Transect I		0.1 m		20	
				21	
	wetted width	<0.1 m		22	
	6.0 m	0.1 m		23	Channel Feature: POOL
		0.1 m		24	
	measurements	0.1 m		25	
	0.6 m	0.1 m		26	Dissolved Oxygen
	apart	0.1 m			
		0.2 m			9.86 ppm
		0.1 m			98 %
		<0.1 m		n	
		<0.1 m			

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.  
If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Kerry Snelson

Date: 5/25/07

Organization: BWR

Position: Env. Scientist

February 5, 2007

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 1260

Site # 4

Transect	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
1	wetted width	20.1 m			
2	7.0 m	0.1 m		1	Channel Feature: RUN
3		0.1 m		2	
4	measurements	20.1 m		3	
5	0.70 m	0.1 m		4	Dissolved Oxygen
6	apart	20.1 m		5	
7		20.1 m		6	9.75 ppm
8		20.1 m		7	97 %
9		20.1 m		8	
10		20.1 m		9	
				10	
				11	
1	wetted width	20.1 m			
2	6.5 m	0.1 m		12	Channel Feature: RUN
3		0.1 m		13	
4	measurements	20.1 m		14	
5	0.65 m	20.1 m		15	Dissolved Oxygen:
6	apart	20.1 m		16	
7		20.1 m		17	9.64 ppm
8		20.1 m		18	96 %
9		20.1 m		19	
10		20.1 m		20	
				21	
				22	
1	wetted width				
2	m			23	Channel Feature:
3				24	
4	measurements			25	
5	m			26	Dissolved Oxygen
6	apart			.	
7				.	
8				.	ppm
9				n	%
10					

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth the middle rank is the median depth.  
If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAS datasheet is true and accurate.

Signed: Kerry Snodden

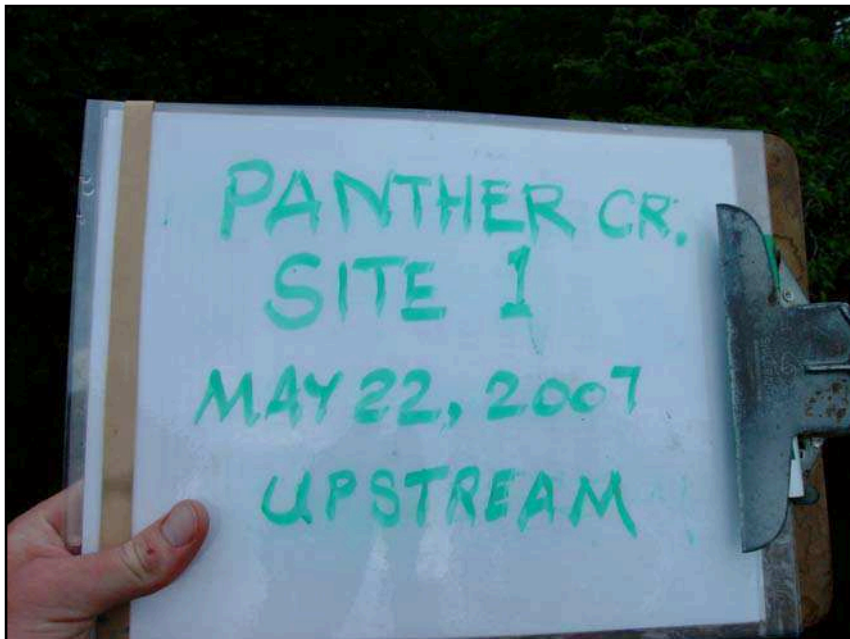
Date: 5/25/07

Organization: BWR

Position: Env. Scientist

February 5, 2007

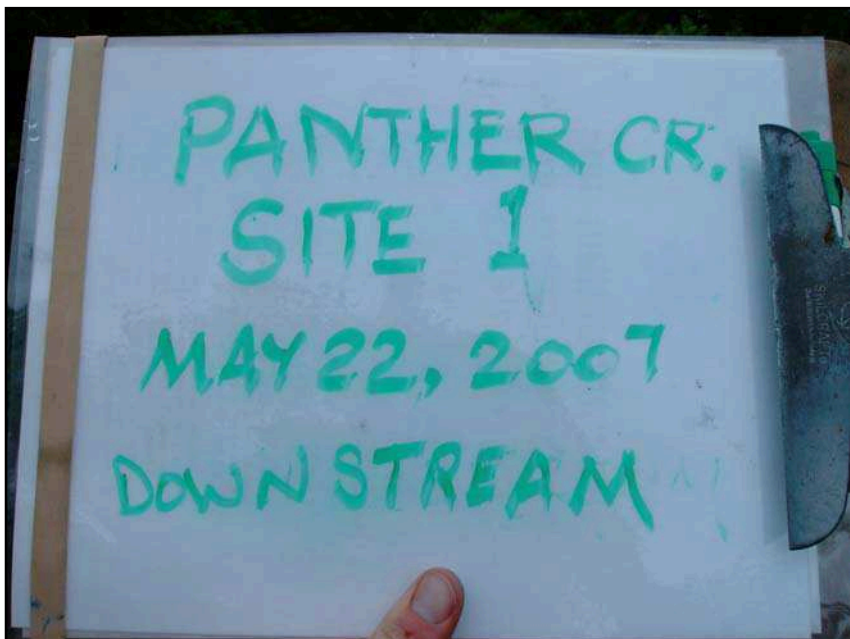




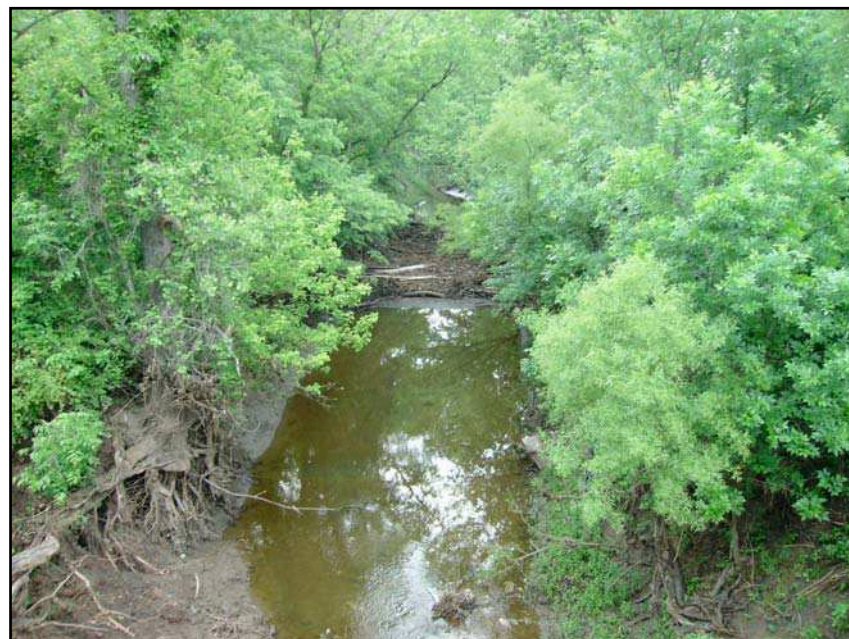
Upstream (Site #1) of Panther Creek.



Upstream (Site #1) of Panther Creek.

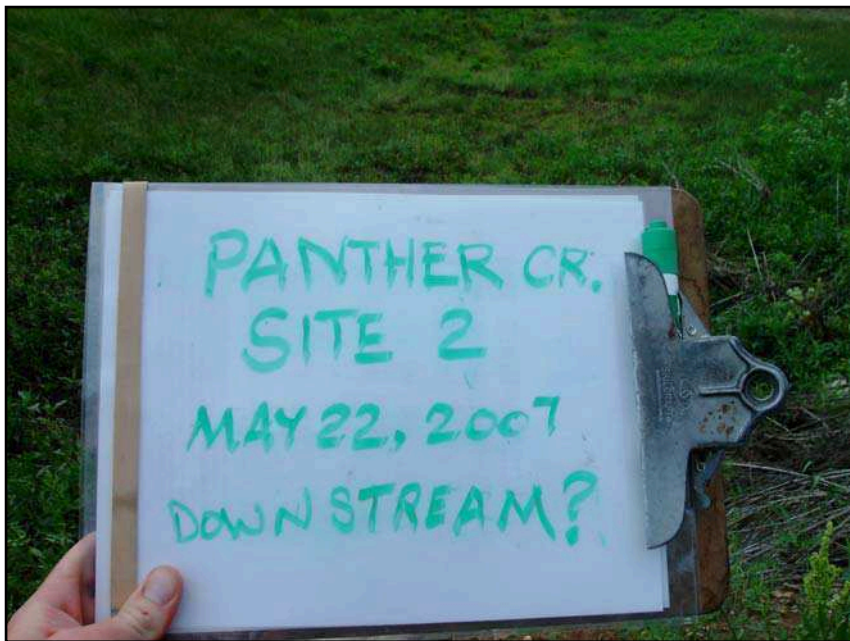


Downstream (Site #1) of Panther Creek.



Downstream (Site #1) of Panther Creek.

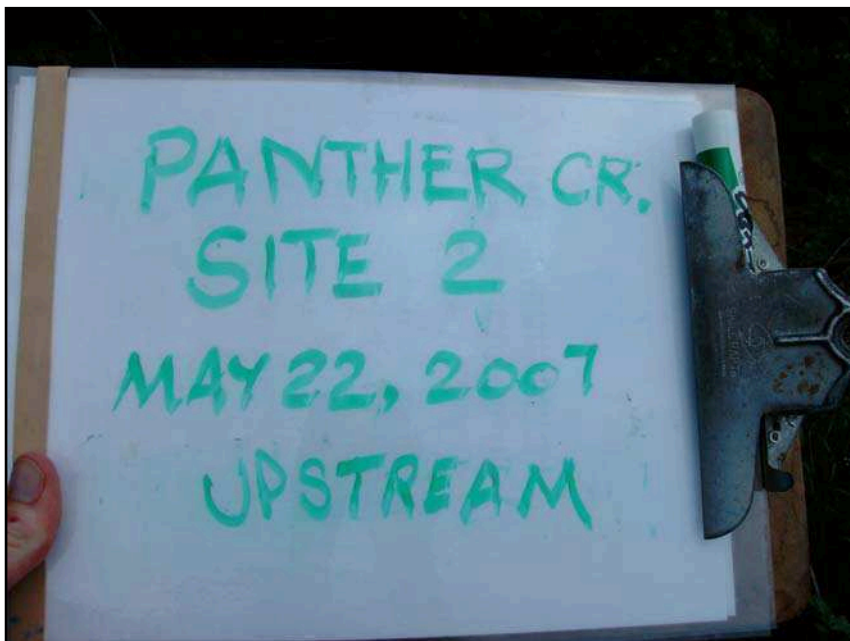




Downstream (Site #2) of Panther Creek.



Downstream (Site #2) of Panther Creek.



Upstream (Site #2) of Panther Creek.



Upstream (Site #2) of Panther Creek.

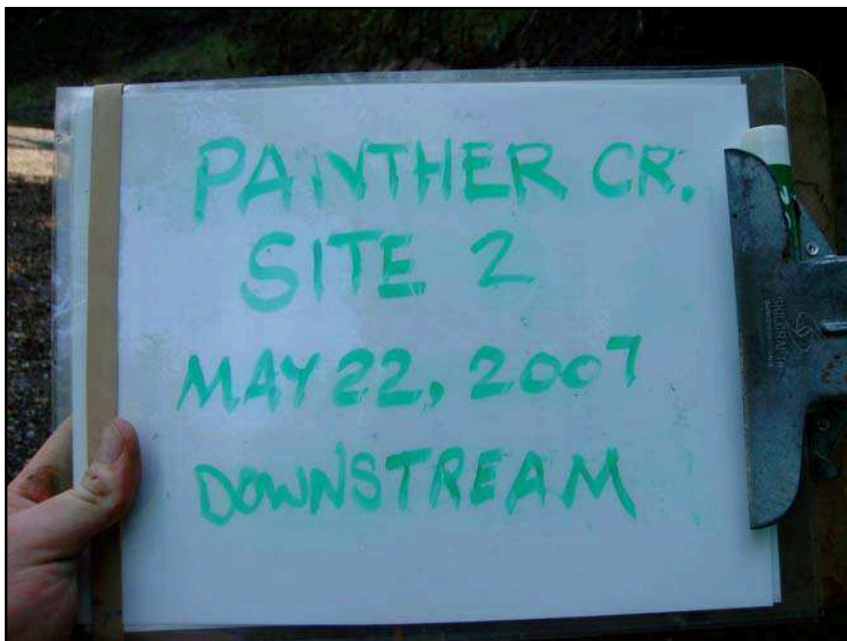




Upstream (Site #2) of Panther Creek.



Upstream (Site #2) of Panther Creek.

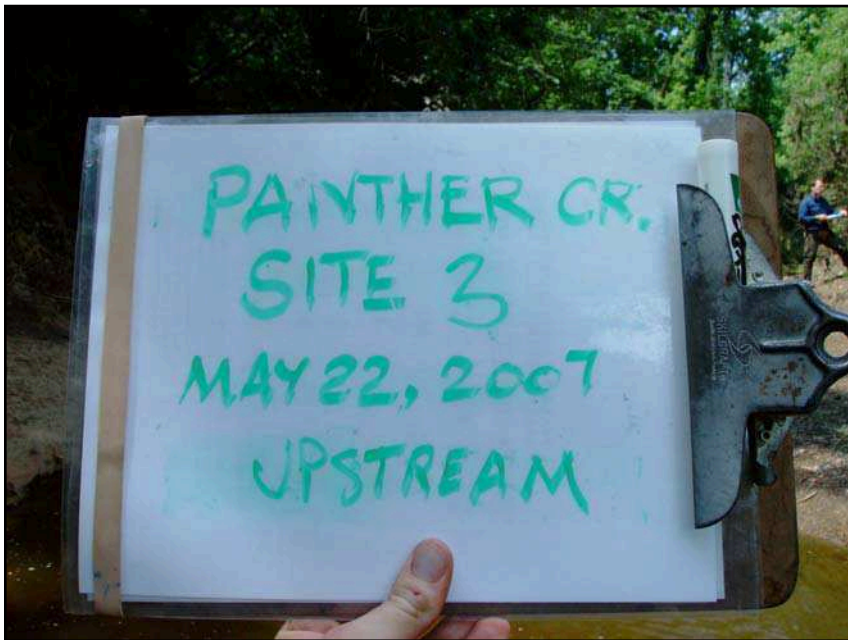


Downstream (Site #2) of Panther Creek.



Downstream (Site #2) of Panther Creek.

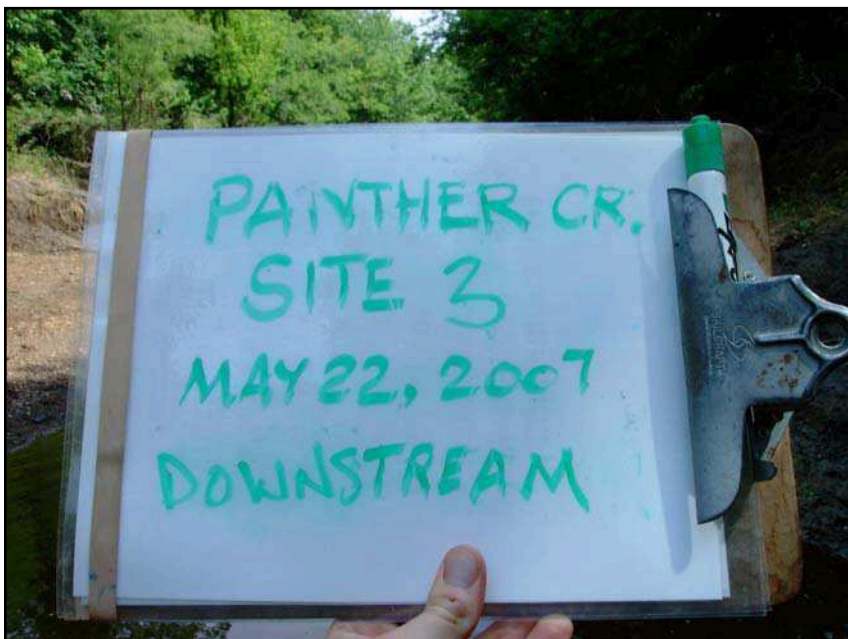




Upstream (Site #3) of Panther Creek.



Upstream (Site #3) of Panther Creek.

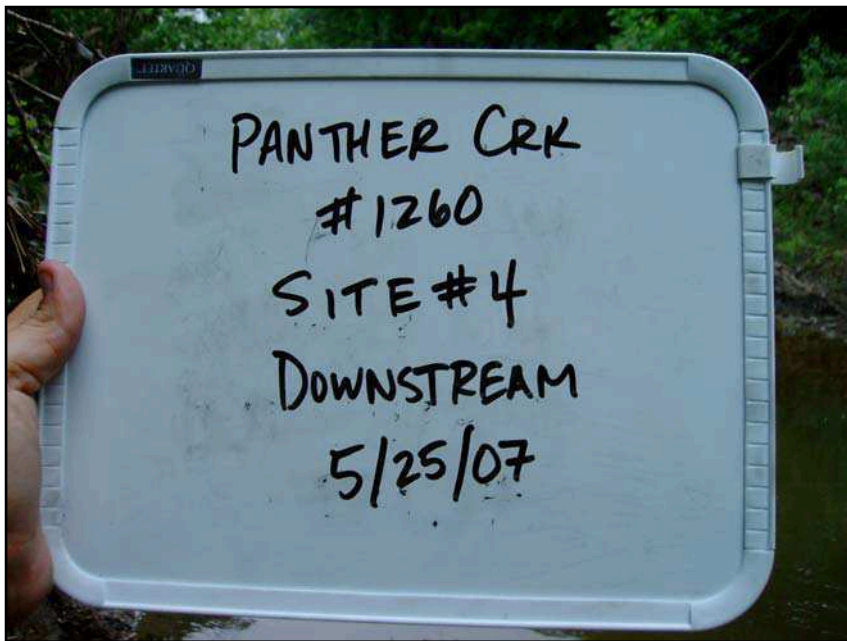


Downstream (Site #3) of Panther Creek.



Downstream (Site #3) of Panther Creek.

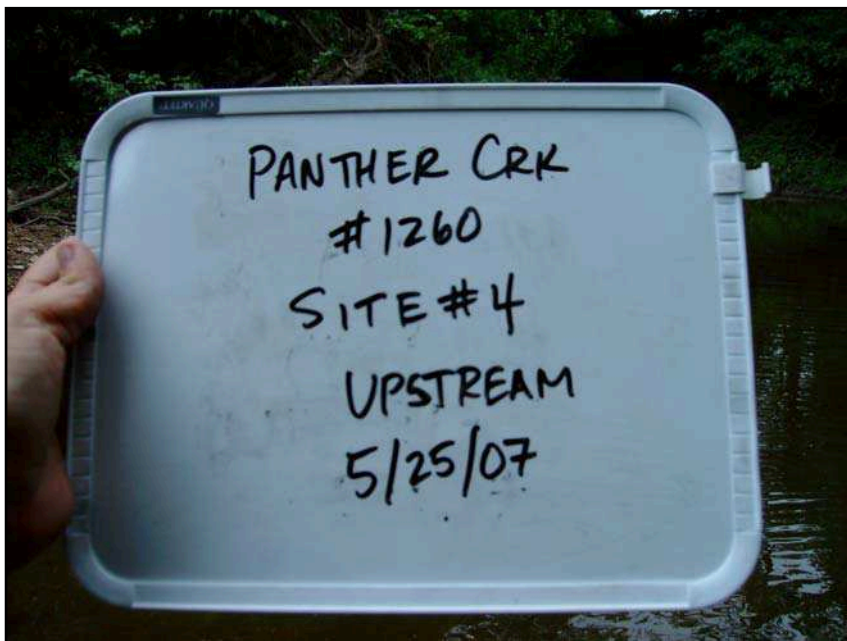




Downstream (Site #4) of Panther Creek.



Downstream (Site #4) of Panther Creek.



Upstream (Site #4) of Panther Creek.



Upstream (Site #4) of Panther Creek.

# Memo

**To:** File  
**From:** Mike Kruse, MO DNR  
**Date:** April 24, 2008  
**Re:** WBID 1260: 2007 UAA site 3

---

GPS coordinates were not written on the data sheets provided for Site 3. However, Alex L. Bartlett of BWR provided the GPS information via e-mail on February 2, 2008. The GPS coordinates Mr. Bartlett provided from his field notes for Site 3 are 38.5739, -94.0437 which would be UTM (Zone 15 X,Y) 409080, 4270011.

\* Lett message  
@ 9:55 AM  
5/22/07

**Field Data Sheet for Recreational Use Stream Survey**

**Data Sheet D—Recreational Use Interview**

**Stream Name** Panther Creek (WBID # 1260)

**I. Introduction**

**Date & Time** (include AM or PM): 5/22/07

**Interviewed:** ☐ In person ☐ By phone ☐ By mail

(NOTE: If you are an Interviewee filling out this form to mail back to DNR, proceed to Question #1.)

**Interviewee selected because** (e.g., house next to stream; standing by stream, etc.) \_\_\_\_\_

**Interviewer introduction to Interviewee:** "My name is \_\_\_\_\_, I work for \_\_\_\_\_ (name of your employer) \_\_\_\_\_, and I am collecting information on how people use \_\_\_\_\_ (name of the stream) \_\_\_\_\_."

**ASK:**

1.) Are you willing to respond to a survey about this stream? (It will just take a few minutes.)

☐ Yes ☐ No If yes, list contact information for the interviewee below:

Legal name: JAMES RIFFLE (Jim)

Current mailing address: 1886 SW. 1100th Rd GARDEN CITY, MO

Daytime phone number: (316) 773-8461

E-mail address (optional): \_\_\_\_\_

64747

2.a.) Do you live in this area? ☒ Yes ☐ No

If yes, how many years?

2.b.) If you don't live nearby, are you still familiar with this stream? ☐ Yes ☐ No

If yes, how many years?

If no, thank the individual for taking the time to talk to you and conclude the interview.

3.) Are you familiar with this particular stretch of the stream? (show them the map, pointing out local landmarks such as roads, bridges, property lines) ☐ Yes ☐ No

If yes, proceed to "II. Personal Use?".

If no, proceed to Section V.

**II. Personal Use?**

1.) Have you or your family personally used the stream for recreation since November 28, 1975?

☐ Yes ☐ No

If yes, proceed to #3.

If no, proceed to #2.

2.a.) List reasons stream not used.

2.b.) Proceed to "III. Witnessed Use?".

3.) How do you use the stream?

<b>Whole Body Contact Recreation</b>			
Swimming <input type="checkbox"/>	Tubing <input type="checkbox"/>	Snorkeling/Skin Diving <input type="checkbox"/>	Water Skiing <input type="checkbox"/>

**If Interviewee (or family) used the stream for WBCR since Nov. 28, 1975, ask:**

4.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

4.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

<b>Secondary Contact Recreation</b>				
Fishing <input type="checkbox"/>	Wading <input type="checkbox"/>	Boating <input type="checkbox"/>	Trapping <input type="checkbox"/>	Other: <input type="checkbox"/> List: _____

**If Interviewee (or family) used the stream for SCR since Nov. 28, 1975, ask:**

4.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

4.d.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

### **III. Witnessed Use?**

1.) Have you observed others using this stream for recreation since Nov. 28, 1975? ☐ Yes ☐ No

If yes, proceed to #2.

If no, proceed to, "IV. Anecdotal Use?".

2.) What kinds of uses have you witnessed?

<b>Whole Body Contact Recreation</b>			
Swimming <input type="checkbox"/>	Tubing <input type="checkbox"/>	Snorkeling/Skin Diving <input type="checkbox"/>	Water Skiing <input type="checkbox"/>

**If Interviewee witnessed WBCR use since Nov. 28, 1975, ask the following questions:**

2.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

2.b.) Where, exactly? Describe specific location *and mark on the map* (Seemap requirements in the protocol). \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Secondary Contact Recreation**

Fishing ☐ Wading ☐ Boating ☐ Trapping ☐ Other: ☐ List: \_\_\_\_\_

If Interviewee witnessed SCR use since Nov. 28, 1975, ask the following questions:

2.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2.d.) Where, exactly? Describe specific location *and mark on the map* (Seemap requirements in the protocol). \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**IV. Anecdotal Use?**

1.) Have you heard about anyone using this stream since Nov. 28, 1975 for recreation – not seen or done yourself, but just heard about it? ☐ Yes ☐ No

If yes, proceed to #2.

If no, thank the individual for taking the time to talk to you and conclude the interview.

2.) What kind of uses have you heard about?

**Whole Body Contact Recreation**

Swimming ☐ Tubing ☐ Snorkeling/Skin Diving ☐ Water Skiing ☐

If Interviewee heard of WBCR use since Nov. 28, 1975, ask the following questions:

2.a.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



### Secondary Contact Recreation

Fishing ☐ Wading ☐ Boating ☐ Trapping ☐ Other: ☐ List:

If Interviewee heard of SCR use since Nov. 28, 1975, ask the following questions:

2.c.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

2.d.) Where, exactly? Describe specific location *and mark on the* (See map requirements in the protocol). \_\_\_\_\_

#### V. Others to Contact?

Can you recommend someone else we could contact that knows the stream? ☐ Yes ☐ No  
If yes, that person's contact info (name, address, phone, directions?) \_\_\_\_\_

If no, thank the individual for taking the time to talk to you and conclude the interview.

#### VI. Additional Comments

1.) From the Interviewee: \_\_\_\_\_

2.) From the Interviewer: \_\_\_\_\_

#### VII. Information on Interviewer

Has interviewer been trained by Missouri DNR to conduct UAA Interviews?

☐ Yes ☐ No If yes, how (check all that apply):

Workshop? (if so, enter date): \_\_\_\_\_

On-line training seminar? \_\_\_\_\_

Followed Interview Instruction Sheets? \_\_\_\_\_

Other \_\_\_\_\_

Interviewer Information:

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Employer (where applicable): \_\_\_\_\_

Interviewer's phone #: \_\_\_\_\_ E-mail: \_\_\_\_\_

\* Left Message @ 9:50 AM

5/22/07

Field Data Sheet for Recreational Use Stream Survey

Data Sheet D—Recreational Use Interview

Stream Name Panther Creek (WBID # 1260)

**I. Introduction**

Date & Time (include AM or PM): \_\_\_\_\_

Interviewed: ☐ In person ☐ By phone ☐ By mail

(NOTE: If you are an Interviewee filling out this form to mail back to DNR, proceed to Question #1.)

Interviewee selected because (e.g., house next to stream; standing by stream, etc.) \_\_\_\_\_

Interviewer introduction to Interviewee: "My name is \_\_\_\_\_, I work for \_\_\_\_\_ (name of your employer), and I am collecting information on how people use \_\_\_\_\_ (name of the stream)."

**ASK:**

1.) Are you willing to respond to a survey about this stream? (It will just take a few minutes.)

☐ Yes ☐ No If yes, list contact information for the interviewee below:

Legal name: GEORGE ROSKOF

Current mailing address: 1198 SW 1671ST RD, GARDEN CITY, MO

Daytime phone number: (816) 862-8460

E-mail address (optional): or 8459

2.a.) Do you live in this area? ☒ Yes ☐ No

If yes, how many years?

2.b.) If you don't live nearby, are you still familiar with this stream? ☐ Yes ☐ No

If yes, how many years?

If no, thank the individual for taking the time to talk to you and conclude the interview.

3.) Are you familiar with this particular stretch of the stream? (show them the map, pointing out local landmarks such as roads, bridges, property lines) ☐ Yes ☐ No

If yes, proceed to "II. Personal Use?".

If no, proceed to Section V.

**II. Personal Use?**

1.) Have you or your family personally used the stream for recreation since November 28, 1975?

☐ Yes ☐ No

If yes, proceed to #3.

If no, proceed to #2.

2.a.) List reasons stream not used.

2.b.) Proceed to "III. Witnessed Use?".

3.) How do you use the stream?

Whole Body Contact Recreation			
Swimming <input type="checkbox"/>	Tubing <input type="checkbox"/>	Snorkeling/Skin Diving <input type="checkbox"/>	Water Skiing <input type="checkbox"/>

If Interviewee (or family) used the stream for WBCR since Nov. 28, 1975, ask:

4.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

4.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

Secondary Contact Recreation				
Fishing <input type="checkbox"/>	Wading <input type="checkbox"/>	Boating <input type="checkbox"/>	Trapping <input type="checkbox"/>	Other: <input type="checkbox"/> List: _____

If Interviewee (or family) used the stream for SCR since Nov. 28, 1975, ask:

4.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

4.d.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

### III. Witnessed Use?

1.) Have you observed others using this stream for recreation since Nov. 28, 1975? ☐ Yes ☐ No

If yes, proceed to #2.

If no, proceed to, "IV. Anecdotal Use?"

2.) What kinds of uses have you witnessed?

Whole Body Contact Recreation			
Swimming <input type="checkbox"/>	Tubing <input type="checkbox"/>	Snorkeling/Skin Diving <input type="checkbox"/>	Water Skiing <input type="checkbox"/>

If Interviewee witnessed WBCR use since Nov. 28, 1975, ask the following questions:

2.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

2.b.) Where, exactly? Describe specific location *and mark on the map* (Seemap requirements in the protocol). \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Secondary Contact Recreation

Fishing ☐ Wading ☐ Boating ☐ Trapping ☐ Other: ☐ List: \_\_\_\_\_

If Interviewee witnessed SCR use since Nov. 28, 1975, ask the following questions:

2.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2.d.) Where, exactly? Describe specific location *and mark on the map* (Seemap requirements in the protocol). \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### IV. Anecdotal Use?

1.) Have you heard about anyone using this stream since Nov. 28, 1975 for recreation – not seen or done yourself, but just heard about it? ☐ Yes ☐ No

If yes, proceed to #2.

If no, thank the individual for taking the time to talk to you and conclude the interview.

2.) What kind of uses have you heard about?

### Whole Body Contact Recreation

Swimming ☐ Tubing ☐ Snorkeling/Skin Diving ☐ Water Skiing ☐

If Interviewee heard of WBCR use since Nov. 28, 1975, ask the following questions:

2.a.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Secondary Contact Recreation*

Fishing ☐    Wading ☐    Boating ☐    Trapping ☐    Other: ☐ List: \_\_\_\_\_

Fishing ☐ Wading ☐ Boating ☐ Trapping ☐ Other: ☐ List:

If Interviewee heard of SCR use since Nov. 28, 1975, ask the following questions:

2.c.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)?

2.d.) Where, exactly? Describe specific location *and mark on the* (See map requirements in the protocol).

## V. Others to Contact?

Can you recommend someone else we could contact that knows the stream? ☐ Yes ☐ No  
If yes, that person's contact info (name, address, phone, directions?) \_\_\_\_\_

If no, thank the individual for taking the time to talk to you and conclude the interview.

## VI. Additional Comments

1.) From the Interviewee: \_\_\_\_\_

2.) From the Interviewer:

## VII. Information on Interviewer

Has interviewer been trained by Missouri DNR to conduct UAA Interviews?

☐ Yes ☐ No If yes, how (check all that apply):

Workshop? (if so, enter date): \_\_\_\_\_

On-line training seminar?

Followed Interview Instruction Sheets?

Other \_\_\_\_\_

Interviewer Information:

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Employer (where applicable): \_\_\_\_\_

Interviewer's phone #: \_\_\_\_\_ E-mail: \_\_\_\_\_

Field Data Sheet for Recreational Use Stream Survey

Data Sheet D—Recreational Use Interview

Stream Name Panther Creek (WBID # 1260)

**I. Introduction**

Date & Time (include AM or PM): 5/22/07 - 9:45 A.M.

Interviewed: ☐ In person ☐ By phone ☐ By mail

(NOTE: If you are an Interviewee filling out this form to mail back to DNR, proceed to Question #1.)

Interviewee selected because (e.g., house next to stream, standing by stream, etc.)

PROPERTY OWNER "not interested... goodbye."

Interviewer introduction to Interviewee: "My name is \_\_\_\_\_, I work for \_\_\_\_\_ (name of your employer), and I am collecting information on how people use \_\_\_\_\_ (name of the stream)."

**ASK:**

1.) Are you willing to respond to a survey about this stream? (It will just take a few minutes.)

☐ Yes ☐ No

If yes, list contact information for the interviewee below:

Legal name: Vernon Harrison

Current mailing address: 1106 SW County road 22, Garden City, MO

Daytime phone number: (816) 862-8646

64747

E-mail address (optional):

2.a.) Do you live in this area? ☒ Yes ☐ No

If yes, how many years?

2.b.) If you don't live nearby, are you still familiar with this stream? ☐ Yes ☐ No

If yes, how many years?

If no, thank the individual for taking the time to talk to you and conclude the interview.

3.) Are you familiar with this particular stretch of the stream? (show them the map, pointing out local landmarks such as roads, bridges, property lines) ☐ Yes ☐ No

If yes, proceed to "II. Personal Use?".

If no, proceed to Section V.

**II. Personal Use?**

1.) Have you or your family personally used the stream for recreation since November 28, 1975?

☐ Yes ☐ No

If yes, proceed to #3.

If no, proceed to #2.

2.a.) List reasons stream not used.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2.b.) Proceed to "III. Witnessed Use?".

3.) How do you use the stream?

<b>Whole Body Contact Recreation</b>			
Swimming <input type="checkbox"/>	Tubing <input type="checkbox"/>	Snorkeling/Skin Diving <input type="checkbox"/>	Water Skiing <input type="checkbox"/>

**If Interviewee (or family) used the stream for WBCR since Nov. 28, 1975, ask:**

4.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

4.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

<b>Secondary Contact Recreation</b>			
Fishing <input type="checkbox"/>	Wading <input type="checkbox"/>	Boating <input type="checkbox"/>	Trapping <input type="checkbox"/> Other: <input type="checkbox"/> List: _____

**If Interviewee (or family) used the stream for SCR since Nov. 28, 1975, ask:**

4.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

4.d.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

### **III. Witnessed Use?**

1.) Have you observed others using this stream for recreation since Nov. 28, 1975? ☐ Yes ☐ No

If yes, proceed to #2.

If no, proceed to, "IV. Anecdotal Use?".

2.) What kinds of uses have you witnessed?

<b>Whole Body Contact Recreation</b>			
Swimming <input type="checkbox"/>	Tubing <input type="checkbox"/>	Snorkeling/Skin Diving <input type="checkbox"/>	Water Skiing <input type="checkbox"/>

**If Interviewee witnessed WBCR use since Nov. 28, 1975, ask the following questions:**

2.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

2.b.) Where, exactly? Describe specific location *and mark on the map* (Seemap requirements in the protocol). \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Secondary Contact Recreation**

Fishing ☐ Wading ☐ Boating ☐ Trapping ☐ Other: ☐ List: \_\_\_\_\_

If Interviewee witnessed SCR use since Nov. 28, 1975, ask the following questions:

2.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2.d.) Where, exactly? Describe specific location *and mark on the map* (Seemap requirements in the protocol). \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**IV. Anecdotal Use?**

1.) Have you heard about anyone using this stream since Nov. 28, 1975 for recreation – not seen or done yourself, but just heard about it? ☐ Yes ☐ No

If yes, proceed to #2.

If no, thank the individual for taking the time to talk to you and conclude the interview.

2.) What kind of uses have you heard about?

**Whole Body Contact Recreation**

Swimming ☐ Tubing ☐ Snorkeling/Skin Diving ☐ Water Skiing ☐

If Interviewee heard of WBCR use since Nov. 28, 1975, ask the following questions:

2.a.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



### Secondary Contact Recreation

Fishing ☐ Wading ☐ Boating ☐ Trapping ☐ Other: ☐ List:

If Interviewee heard of SCR use since Nov. 28, 1975, ask the following questions:

2.c.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

2.d.) Where, exactly? Describe specific location *and mark on the* (See map requirements in the protocol). \_\_\_\_\_

#### V. Others to Contact?

Can you recommend someone else we could contact that knows the stream? ☐ Yes ☐ No  
If yes, that person's contact info (name, address, phone, directions?) \_\_\_\_\_

If no, thank the individual for taking the time to talk to you and conclude the interview.

#### VI. Additional Comments

1.) From the Interviewee: \_\_\_\_\_

2.) From the Interviewer: \_\_\_\_\_

#### VII. Information on Interviewer

Has interviewer been trained by Missouri DNR to conduct UAA Interviews?

☐ Yes ☐ No If yes, how (check all that apply):

Workshop? (if so, enter date): \_\_\_\_\_

On-line training seminar? \_\_\_\_\_

Followed Interview Instruction Sheets? \_\_\_\_\_

Other \_\_\_\_\_

#### Interviewer Information:

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Employer (where applicable): \_\_\_\_\_

Interviewer's phone #: \_\_\_\_\_ E-mail: \_\_\_\_\_